

(17.6%). Mean values of SAEKG parameters for the entire group are: fQRS 140.7 ± 36.3 ms, LAS 66.2 ± 32.6 ms and RMS 15.6 ± 12.3 μ V. Sixteen pts showed increased dimensions of the RV in parasternal long axis ($31-85$ mm; 42.8 ± 14.7 mm). No significant correlations was found between RV dimension and fQRS duration ($r=0.21$), LAS duration ($r=0.39$) and RMS voltage ($r=-0.48$).

Conclusions: A high significance of LP (70.6%) was found in patients with ARVD. A normal finding of SAEKG doesn't exclude the existence of ARVD. No correlation has been found between the SAEKG parameters and RV dimensions in the echocardiographic parasternal long axis view. LP were also present in patients with minimal RV dilation. Some patients develop localized RV enlargements which can be detected only in particular echocardiographic views.

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Predictors of arrhythmic events during second day Holter monitoring in patients with normal first day recordings

M.A. Sadr-Ameli¹, A. Arya², M. Haghjoo¹, A. Khosrawi¹, Z. Emkanjoo¹, A.F. Fazelifar¹

¹Tehran, Iran (Islamic Republic of)²Tehran, Iran (Islamic Republic of)

Purpose: The diagnostic yield of Holter monitoring in patients with syncope is variably reported to be between 6-20%. This study was done to define predictors of arrhythmic events during the second day of Holter monitoring in patients whose first day Holter recordings were normal.

Method: Two serial 24-hour Holter recordings were obtained in a consecutive series of 100 patients (49 patients with unexplained syncope and/or presyncope and 51 patients with palpitation).

Results: The age of patients was 53.4 ± 16.9 years and 51 were men. Seventy-six patients had underlying heart disease (UHD). Major electrocardiographic findings (MEF) were found in 40 (40%) patients including nonsustained ventricular tachycardia in 19, sinus pause in 13, symptomatic bradycardia in 5, paroxysmal atrial fibrillation in 4, sustained supraventricular tachycardia in 2, and Mobitz type II second-degree atrioventricular block in 3 patients. Twenty seven (27%) patients had 33 MEF during the first day and 13 out of the remaining 73 patients (17.8%) had it during the second day of Holter recording. Presenting symptom (syncope/presyncope), age > 65 years, and male gender were significantly associated with increased likelihood of MEF during the second day of Holter monitoring ($P=0.006$, $P=0.023$, and $P=0.024$, respectively). The risk of MEF ranged from 5% in patients with no or one predictor to 35% in those with two or three predictors. ($OR=9.95$, $CI=2.01$ to 49.2 , $P=0.002$).

Conclusions: Presenting symptom (syncope/presyncope), age > 65 years, and male gender, increased the likelihood of MEF during the second day of Holter monitoring.

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Brugada syndrome in a preschooler presenting as febrile convulsions

A. Pflaumer¹, B. Zrenner², A. Eicken³, S. Brodherr³, J. Hess³

¹Deutsches Herzzentrum Muenchen, EPU Dept., Munich, Germany;

²Deutsches Herzzentrum Muenchen, Klinik f r Kardiologie, Klinik an

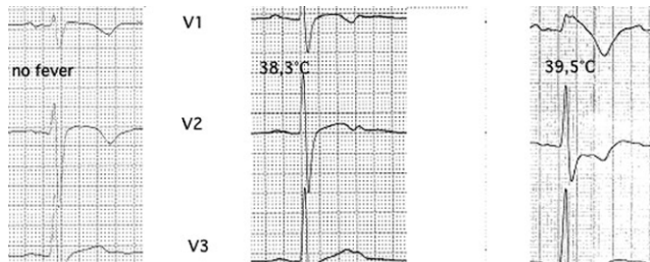
der TUM, Germany; ³Deutsches Herzzentrum Muenchen,

Kinderkardiologie, Muenchen, Germany

Introduction: Brugada Syndrome can cause fatal ventricular tachycardia. In childhood this syndrome is rarely diagnosed, perhaps because symptoms can be unspecific and are often misinterpreted as other common disorders.

Case Report: We report on a 4-year-old girl that showed loss of consciousness and tonic convulsions in conjunction with high fever, when she was three years old. Twelve-lead ECG in the emergency department showed distinct changes in repolarisation, which disappeared the following day. Further evaluation in the pediatric department showed evidence of viral illness and the diagnosis of a febrile convulsion was made. One year later the child was admitted again with high fever and

became unconscious again. The ECG showed ventricular tachycardia. After stabilization the child was transferred to our hospital for further evaluation. The actual ECG showed only very discrete ST - elevation in right precordial leads, being more pronounced with elevation of body-temperature. Intravenous administration of flecainide led to a fast ventricular tachycardia, which was terminated by DC- defibrillation. Other potential reasons for rhythm disorders were excluded. Genetically, the diagnosis of Brugada Syndrome was confirmed. A defibrillator with transvenous leads was implanted. The follow up within the next year was uneventful.



Repolarisation changes

Conclusion: Typical ECG changes characteristic for Brugada Syndrome as well as occurrence of ventricular tachycardia can be provoked by elevated body temperature. Brugada syndrome should be considered as a possible diagnosis in children with so called febrile convulsions and distinct abnormalities of ECG-repolarisation.

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Analysis of heart rate variability (HRV) based on RR- and PP-intervals of implantable cardioverter defibrillator (ICD): a new method to evaluate atrial and ventricular HRV

J.O. Schwab¹, O. Balta², D. Passmann³, M. Meyer³, B. Schuhmacher⁴, B. L. deritz², T.H. Lewalter² on behalf of BELOS DR Master-Study

¹Bonn, Germany; ²University of Bonn, Medicine - Cardiology, Bonn, Germany; ³Biotronik, Center Clinical Research, Berlin, Germany;

⁴Kardiologie, Herz- und Gef ssklinik, Bad Neustadt an der Saale, Germany

HRV quantifies cardiac autonomic modulation by means of computing RR-intervals extracted from Holter ECG. A new ICD generation (Lexos and Belos DR, Biotronik Inc.) offers the possibility to analyse HRV on atrial and ventricular basis as well as their circadian rhythm. Consequently, new insights into the formation of HRV are possible.

Methods: We analysed 27 data sets of patients with a mean age of 66.2 ± 8.7 and ejection fraction of $42 \pm 10\%$. RR- and PP-Intervals were recorded for 30 min at 8 a.m., 4, and midnight. We calculated time and frequency domain parameters of HRV with a supplied computer software (CDM 3000, Biotronik Inc.).

Results: The mean heart rate derived from PP- and RR-intervals revealed no significant difference. A circadian alteration of time domain analysis parameter was clearly demonstrated with a SDNN minimum at 4 p.m. (PP: 55 ms, RR: 34 ms) and a maximum at midnight (PP: 63 ms, RR: 57 ms). In addition, total power demonstrated a maximum at midnight (PP: 14232 ms², RR: 7236 ms²) and a minimum at 4 p.m. (PP: 9100 ms², RR: 3162 ms²).

Conclusion: The recent generation of dual chamber ICDs offers a chance to subtly analyse HRV. We found a circadian rhythm of both, PP- and RR-HRV, with an easy computation of extracted intervals. More longitudinal data are necessary to discover premature changes of the cardiac autonomic modulation signalling a potential precursor of life threatening arrhythmias. Moreover, our data emphasise to be aware of circadian alterations when discussing HRV parameters